

Leidy, Robert

From: Julia Fonseca [Julia.Fonseca@pima.gov]
Sent: Monday, July 01, 2013 12:00 PM
To: Leidy, Robert
Subject: Water budget projections based on population

Hi, this paper used four growth scenarios relative to basin water budgets, including Aravaipa, Cienega and many other basins in Arizona. You can download a copy from here:

http://azconservation.org/downloads/sustainable_water_management_in_the_southwestern_united_states

Julia Fonseca

Environmental Planning Manager

Pima County Office of Sustainability and Conservation
201 N. Stone, 6th floor
Tucson, AZ 85701
(520) 724-6460
Julia.Fonseca@pima.gov

Leidy, Robert

From: Julia Fonseca [Julia.Fonseca@pima.gov]
Sent: Monday, July 01, 2013 12:10 PM
To: 'Julie Stromberg'
Cc: Leidy, Robert
Subject: ET and climate change

Follow Up Flag: Follow up
Flag Status: Flagged

Hi, Julie,

I recall you once shared with me a graph relating change in temperature to riparian ET, but I could not find it in my files. Robert Leidy, EPA Senior Scientist in SF, would appreciate any information you might have, and so would I.

BTW, last week I observed recent ongoing die-off of cottonwoods and mesquite bosque going on in parts (less than 10%?) of the San Pedro Valley north of Redington, south of San Manuel. We are losing more of the bosque in the Cienega Creek Natural Preserve during the time period 2005-2011, too. The recent LiDAR work supports a decline in canopy height in that plant community. And Miguel Villareal has documented loss of bosque along Davidson, most of it during 2002-2006 drought.

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Leidy, Robert

From: Julia Fonseca [Julia.Fonseca@pima.gov]
Sent: Monday, July 01, 2013 12:31 PM
To: Leidy, Robert
Subject: Climate change and riparian ecosystems in Western US

You may be familiar with this lit review by Perry et al. already

<http://www.fort.usgs.gov/Products/Publications/23228/23228.pdf>

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Leidy, Robert

From: Julia Fonseca [Julia.Fonseca@pima.gov]
Sent: Tuesday, July 02, 2013 11:37 AM
To: "Gita Bodner" (gbodner@TNC.ORG)
Cc: Leidy, Robert
Subject: FW: LCNCA channel cross sections, 1993 and 2006, with water noted

I think the answer is yes, Robert, but I defer to Gita to be sure!

-----Original Message-----

From: Leidy, Robert [<mailto:Leidy.Robert@epa.gov>]
Sent: Tuesday, July 02, 2013 11:36 AM
To: Julia Fonseca
Subject: RE: LCNCA channel cross sections, 1993 and 2006, with water noted

Hi Julia,

Thanks so much for sending this along and the other references. They will be very useful. I am not sure that I can discern water depth from this information. Can I get water depth in the wetted-channel from these cross sections?

Thanks much,

Rob

Robert A. Leidy, Ph.D.
U.S. Environmental Protection Agency
Wetlands Office (WTR-8)
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3463

-----Original Message-----

From: Julia Fonseca [<mailto:Julia.Fonseca@pima.gov>]
Sent: Monday, July 01, 2013 8:36 AM
To: Leidy, Robert
Cc: "'Gita Bodner'" (gbodner@TNC.ORG)
Subject: FW: LCNCA channel cross sections, 1993 and 2006, with water noted

Hi, Robert, is this the type of data you want? The is a repeat cross section measured in 1993 and 2006 describing elevation of plant communities relative to cross-sectional geometry of the floodplain, with remarks about where surface water was at the time.

-----Original Message-----

From: Gita Bodner [<mailto:gbodner@tnc.org>]
Sent: Friday, June 28, 2013 6:36 PM
To: Julia Fonseca
Subject: LCNCA channel cross sections, 1993 and 2006, with water noted

Is this the type of info you thought would be useful?

Some show water, e.g. EG1; others do not (were dry).

I think that comprehensive survey of the channel by Lawson and Huth would have lots of info on depth to surfacewater in it, but needs someone with more experience working with that kind of survey data to work with it easily.

Gita

Lawson, L., and H. Huth. 2003. Lower Cienega Creek Restoration Evaluation Project: An investigation into developing quantitative methods for assessing stream channel physical condition. Arizona Water Protection Fund Grant #90-068 WPF. Produced by the Arizona Department of Environmental Quality, Southern Regional Office Tucson AZ, Report #EQR0303. 76 p.

Leidy, Robert

From: Gita Bodner [gbodner@tnc.org]
Sent: Tuesday, July 02, 2013 4:56 PM
To: Julia Fonseca
Cc: Leidy, Robert
Subject: RE: LCNCA channel cross sections, 1993 and 2006, with water noted

Looks like only 2 of them had water in 2006 (EG1 and CC7). Both have notes with rough water depth measurements.

The "corrected channel elevation" column is the vertical distance from terrace to channel bottom. You can estimate depth of water by taking the "edge of water" elevation marks and subtracting the depth of the channel bottom, though this is less reliable than the actual measurements.

Also, if it's water depth itself that you are interested in, rather than channel cross section, Jeff Simms from BLM has taken a lot of stream depth measurements as part of his extensive aquatic habitat surveys in 1990 and 2000. These have the stream broken down by reach, and by habitat type (pools, riffles, runs, etc.), with length, width, and depth measures for each. I helped him analyze this data a few years ago.

He has also measured depth of a subset of pools specifically (not runs or riffles) during annual fish surveys in years since.

Would that data be more useful to you? If you don't have it, you can ask Jeff for it (jsimms@blm.gov) or I can help get it to you.

Gita

-----Original Message-----

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Leidy, Robert

From: Julia Fonseca [Julia.Fonseca@pima.gov]
Sent: Monday, August 05, 2013 8:16 AM
To: Goldmann, Elizabeth; Leidy, Robert
Subject: FW: LCNCA
Attachments: photo.JPG

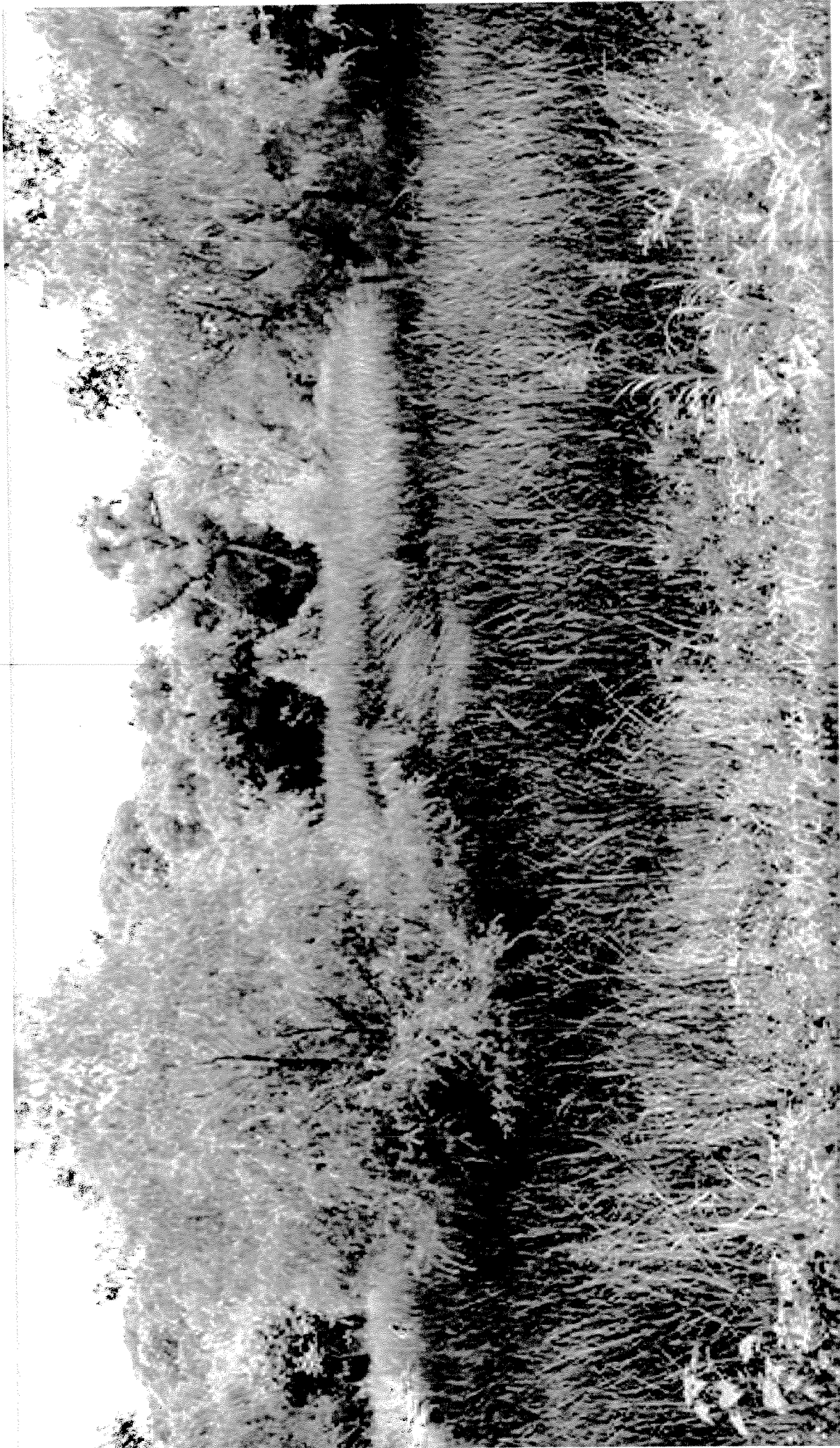
FYI.

-----Original Message-----

From: Michael McNulty [<mailto:Michael.McNulty@pcao.pima.gov>]
Sent: Monday, August 05, 2013 8:12 AM
To: Julia Fonseca; Brian Powell
Cc: Harlan Agnew
Subject: LCNCA

I think the Empire Ranch looks a little drier at this time of year than it should - or, at least drier than it has looked in early August in years past. Nevertheless, if you get down near the creek, you feel like you're in an entirely different part of the planet.

This message has been prepared and sent on resources owned by Pima County, Arizona. It is subject to the Computer Use Policy of the Pima County Attorney's Office, as well as the computer and electronic mail policies of Pima County and the Pima County Board of Supervisors.



Leidy, Robert

From: Mead Mier [MMier@pagnet.org]
Sent: Friday, August 23, 2013 4:46 PM
To: MMier@pagnet.org
Subject: Cienega Flow Mapping 9/5
Attachments: PAGCienegaDriest2013.pdf

Dear Cienega Contacts,

PAG will be conducting the Fall "wet-dry" mapping walk-through of lower Cienega Creek in the County Natural Preserve on Thursday Sept 5th, 2013.

Please let me know if you would like to join us for a day of information exchange and if you can bring a four wheel drive.

We will meet at the Quick Mart at 7am in Vail.

Plan to *not* be back in town before 6pm although we have ended as early as 3 in the past.

Bring lunch, plenty of water, shoes to rock hop or trek through water and sand, long pants, sun protection.

Thank you to all who were able to attend in June. Your insight is always valuable.

Unfortunately, the perennial flow extent was reduced to 0.93 miles in June 2013, the lowest flow extent on record and 0.31 miles shorter than last June. This is 25% lower over one year. The 0.93 miles of flow is 10% of the flow extent compared to the wet years in the mid 1980s when fully 9.5 miles flowed in Preserve during the dry season.

(see attached)

Sincerely,
Mead

*Mead Mier
Senior Watershed Planner
Sustainable Environment Program
Pima Association of Governments (PAG)
177 N Church Ave, Suite 405, Tucson, Arizona 85701
520-495-1464 MMier@PAGnet.org
Join us on Facebook: [Clean Water Starts With Me!](#)
Also on Facebook: [Cienega Watershed Partnership](#)*

Drought Impacts on Flow Extent Along Lower Cienega Creek

**Marsh Station Bridge
Streamflow Site
on Cienega Creek**



June 2013



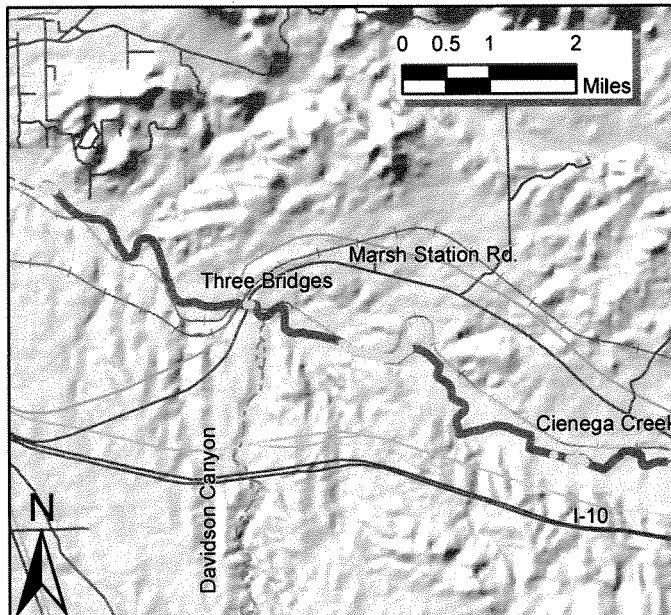
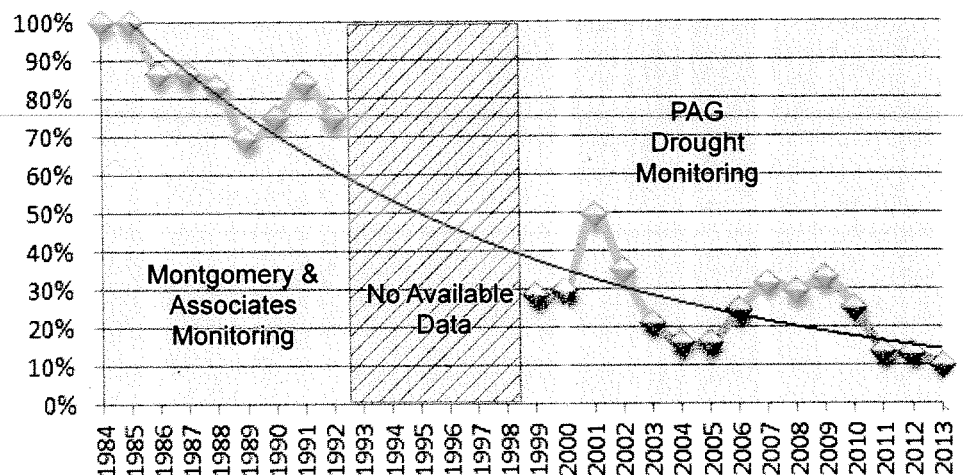
June 2009

Cienega Creek experienced record breaking drought conditions in summer 2013. Prolonged drought impacts the creek by decreasing flow volume and extents.

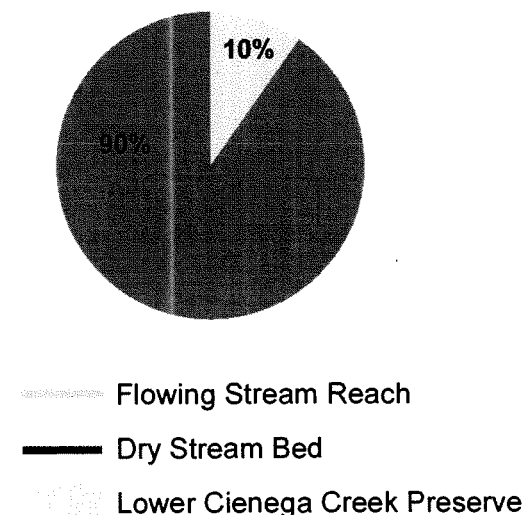
PAG monitors streamflow quarterly in the Pima County Natural Preserve. The flow extent is measured during the PAG walk-through of the Preserve from the I-10 overpass to the dam. May-July is the driest season in Arizona, making it the best time to estimate the minimum perennial streamflow.

The perennial flow extent was reduced to 0.93 miles in June 2013, the lowest flow extent on record and 0.31 miles shorter than the previous June. This is only 10% of the flow extent compared to the wet years in the mid 1980s when fully 9.5 miles flowed in Preserve during the dry season.

Percent Flowing (Wet) from June 1984 - 2013



Driest Year - June 2013



Leidy, Robert

From: Chris Cawein [Chris.Cawein@pima.gov]
Sent: Thursday, September 12, 2013 7:42 AM
To: Leidy, Robert
Cc: Julia Fonseca; Kenneth Maits
Subject: RE: Cienega Creek ILF Mitigation site Concept
Attachments: cienega 1936 smaller.PDF

Rob –

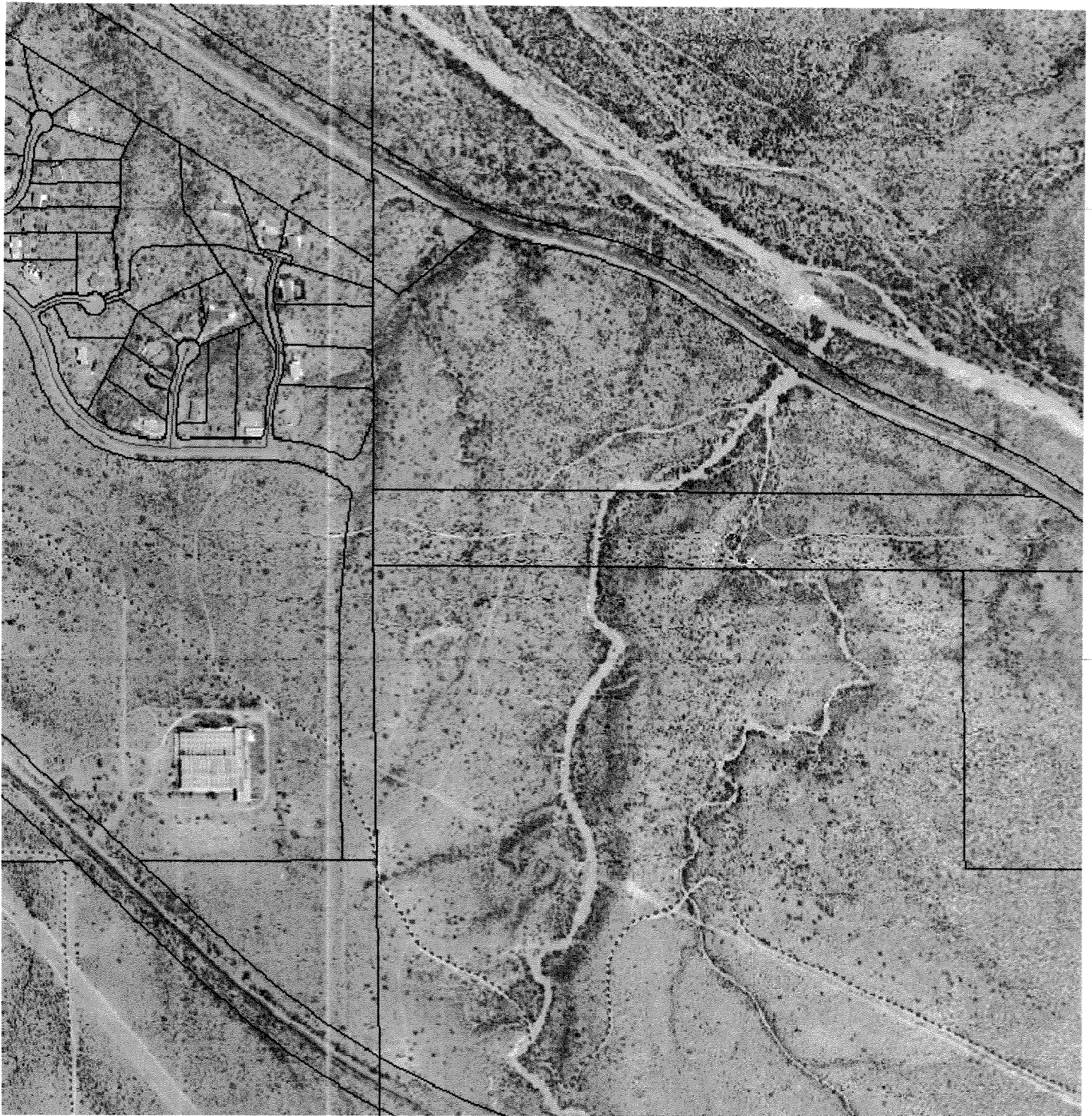
Not sure if you were hoping for ground shots or aerials but I was quickly able to locate on our set of 1936 aerial photos a shot of the Cienega Creek area and I believe I can place on that photo where the dam is located based on other nearby physiographic features. I've embedded the 2012 aerial of the area in this email for comparison purposes.

I saved that 1936 photo as a pdf and am attaching it to this email. Unfortunately it split onto 2 pages but you can see at the bottom of the first page a pinch point in the creek where it turns at an approximate 90 degree angle to the west.

That appears to be the area of the dam.

I am copying Ken Maits from RFCD on this email as Ken manages our Information Management Section as he might be assist in locating additional historical photos of the area. Although we do have an aerial series from the 1940s, I do not believe they extend out this far. Let me know if questions. Regards, Chris

*Chris Cawein
Interim Director
Natural Resources, Parks and Recreation*



From: Leidy, Robert [<mailto:Leidy.Robert@epa.gov>]
Sent: Wednesday, September 11, 2013 3:15 PM
To: Chris Cawein
Subject: RE: Cienega Creek ILF Mitigation site Concept

Hello Chris,

Thank you in taking the time to taking with me and Elizabeth and for sending this along; it has proved helpful in our ongoing discussions with the Corps. I was talking to Julia Fonseca today about the availability of historical images of Pantano Wash below the dam and she believes that Pima County Flood Control might have photos from the 1930s-1960s scanned and available. We would be interested in getting these photos, perhaps electronically, if available.

I realize that you have new duties now and are very busy. Perhaps you know of a contact with Pima County that might be able to assist us?

Thanks again,

Rob

Robert A. Leidy, Ph.D.
U.S. Environmental Protection Agency
Wetlands Office (WTR-8)
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3463

From: Chris Cawein [<mailto:Chris.Cawein@pima.gov>]
Sent: Monday, September 09, 2013 9:54 AM
To: Goldmann, Elizabeth
Cc: Suzanne Shields
Subject: Cienega Creek ILF Mitigation site Concept

Elizabeth – Attached is the latest plan for this proposed ILF site as discussed this morning.

Please let me know if questions and also please confirm receipt of this due to its fairly large size. Thanks, Chris

*Chris Cawein
Interim Director
Natural Resources, Parks and Recreation*



